CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
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B362   White-breasted Nuthatch   Sitta carolinensis
Family: Sittidae Order: Passeriformes Class: Aves

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

   A common resident in many woodland habitats throughout the state, but especially in hardwood and hardwood-conifer habitats dominated by oaks. Breeds and winters in all major mountain ranges, including the White Mts. and Warner Mts., but mostly excluding ranges in the southeastern deserts. Also breeds in coastal oak woodlands from the Oregon border to southern California, east of the humid coastal belt. There is downslope and southerly movement from northern areas in winter, and postbreeding wandering in other parts of the state. Rarely wanders to southern desert areas. Has been found as high as 3350 m (11,000 ft.) following breeding at lower elevations.

SPECIFIC HABITAT REQUIREMENTS

   Feeding: Mostly eats insects and spiders during breeding season. Also eats acorns and large seeds in other seasons. Gleans from trunks and branches of live trees and snags. Stores acorns and seeds for winter, and defends these food caches (Bent 1948).

   Cover: Large trees and snags in oak woodlands, pine-oak woodlands, pine and fir forests, pinyon and juniper woodlands, and riparian habitats provide cover. Roosts in tree or snag cavity.

   Reproduction: Nests in cavity in tree or snag. Usually excavates own cavity, but uses old woodpecker hole occasionally; can excavate only in well-decayed wood. In Sierra Co., mean nest tree height averaged 10.8 m (33.5 ft), range 2.3-26 m (7.2-80 ft); nest hole height averaged 6.0 m (18.6 ft), range 1.2-20 m (4-61 ft). Mean dbh of nest tree was 64 cm (25 in), range 36-138 cm (14-54 in) (Raphael and White 1978, 1984). Appears to wipe nest hole entrance with insects; function unknown (Kilham 1968).

   Water: In coastal California, seldom drinks water (Williams and Koenig 1980).

   Pattern: Frequents oak woodland habitats throughout range. Also uses woodlands lacking oaks. Large trees and snags required.

SPECIES LIFE HISTORY

   Activity Patterns: Yearlong, diurnal activity.

   Seasonal Movements/Migration: Some movement upslope in late summer and downslope in winter. Seldom recorded in southern deserts or on Channel Islands. Apparently not a latitudinal migrant in California; there is only 1 record (10-11 Oct.) on South Farallon Islands (DeSante and Ainley 1980).

Home Range: Probably equal to territory, or larger.

Territory: In New Hampshire, Kilham (1972) reported territory averaged 15 ha (37 ac). Fitch (1958) reported 1 territory of 15 ha (37 ac) in Kansas. In Colorado, Hering (1948) reported foraging territory of 2 breeding pairs as 0.7 and 0.9 ha (1.7 and 2.3 ac). Butts (1931) reported breeding density of 4.6 pairs per 40 ha (100 ac) in New York, and winter territory of about 10 ha (25 ac). Stallcup (1968) recorded average annual density of 3.9-7.1 per 40 ha (100 ac) in Colorado. Breeding density in the Sierra Nevada, taken from American Birds (1948-1976) included 9-38 pairs per 40 ha (100 ac) (avg 22, N = 3) in oak woodland, 5-15 pairs per 40 ha (100 ac) (avg 12, N = 3) in riparian, and 1.2-3.5 per 40 ha (100 ac) (avg 2.4, N = 3) in coniferous forests (summarized by Raphael and White 1978).

Reproduction: Solitary and monogamous; breeds from mid-March to late July, with peak in May. Single brooded; clutch averages 6-7 eggs, range 5-9. Incubation about 12 days, by female, fed by male. Altricial young fed by both parents for 2 wk after leaving nest (Harrison 1978).

Niche: Subject to the same predators as other forest-dwelling passerines: accipiters, snakes, domestic cats, and small mammals.

REFERENCES

Bent, A. C. 1948. Life histories of North American nuthatches, wrens, thrashers, and their allies. U.S. Natl. Mus. Bull. 195. 475pp.
Butts, W. K. 1931. A study of the chickadee and white-breasted nuthatch by means of marked individuals III. The white-breasted nuthatch (Sitta carolinensis cookei). Bird-Banding 2:59-76.
DeSante, D. F., and D. G. Ainley. 1980. The avifauna of the South Farallon Islands, California. Studies in Avian Biol. No. 4. Cooper Ornithol. Soc., Lawrence, KA. 104pp.
Fitch, H. S. 1958. Home ranges, territories, and seasonal movements of vertebrates of the Natural History Reservation. Univ. Kans., Lawrence. Publ. Mus. Nat. Hist. 11:63-326.
Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
Harrison, C. 1978. A field guide to the nests, eggs and nestlings of north American birds. W. Collins Sons and Co., Cleveland OH. 416pp.
Hering, L. 1948. Nesting birds of the Black Forest, Colorado. Condor 50:49-56.
Kilham, L. 1968. Reproductive behavior of white-breasted nuthatches. I. Distraction display, bill sweeping, and nest hole defense. Auk 85:477-92.
Kilham, L. 1972. Reproductive behavior of white-breasted nuthatches. II. Courtship. Auk 89:115-129.
McEllin, S. M. 1979. Population demographies, spacing, and foraging behaviors of white-breasted and pygmy nuthatches in ponderosa pine habitat. Pages 301-329 in J. G. Dickson, R. N. Conner, R. R. Fleet, J. C. Kroll, and J. A. Jackson, eds. The role of insectivorous birds in forest ecosystems. Academic Press, New York. 381pp.
Raphael, M. G., and M. White. 1978. Avian utilization of snags in a northern California coniferous forest. U.S. Dep. Agric., For. Serv., Reg. 5, San Francisco. Prog. Rep. 18pp.
Raphael, M. G., and M. White. 1984. Use of snags by cavity-nesting birds in the Sierra Nevada. Wild. Monogr. No. 86. 66pp.
Stallcup, R. L. 1968. Spatio-termporal relationships of nuthatches and woodpeckers in ponderosa pine forest of Colorado. Ecology 49:831-843.
Williams, P. L., and W. D. Koenig. 1980. Water dependence of birds in a temperate oak woodland. Auk 97:339-350.